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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,960	12/31/2003	Eugene George Olczak	040849-0240	6226
22428	7590	11/17/2005	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			CONSILVIO, MARK J	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/747,960	Applicant(s) OLCZAK, EUGENE GEORGE	
	Examiner Mark Consilvio	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/04 and 5/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group I in the reply filed on 8/29/2005 is acknowledged. Consequently, claims 1-25 are currently pending but claims 16-20 have been withdrawn from consideration.

### ***Information Disclosure Statement***

The information disclosure statements (IDS) submitted on 6/17/2004 and 5/2/2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the a spherical lens microlens structure, an aspherical lens microlens structure, an elliptical lens microlens structure, and a parabolic lens microlens structure must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

Art Unit: 2872

sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 24, and 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Gariner (WIPO Publication No. 02/04858).

With respect to claim 1, Gardiner discloses an optical film (80) comprising: a first surface (84) defined by a first surface structure function (86) modulated by a second surface structure (88) function such that the first surface acts to diffuse light incident on the film, wherein the first surface structure function has a function of a microlens structure, and the second surface structure function has characteristics to provide the diffuse light (fig. 9).

With respect to claim 24, Gardiner discloses a prism film comprising: a first surface (126) comprising a plurality of raised prismatic features (124); and a second surface (132) opposing the first surface, the second surface defined by a first surface structure (130) function modulated by a second surface structure function (128) such that the second surface acts to diffuse light incident on the film, wherein the first surface structure function has a function of a microlens structure, and the second surface structure function has characteristics to provide the diffuse light (fig. 16 and p. 17).

With respect to claim 25, Gardiner discloses the first surface structure function is one of a cylindrical lens microlens structure, a spherical lens microlens structure, an aspherical lens microlens structure, an elliptical lens microlens structure, and a parabolic lens microlens structure (fig. 13).

Claim 1 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamshita (US Patent No. 6,130,777).

With respect to claims 1 and 21, Yamashita teaches a method of forming an optical film, comprising: forming the optical film, the optical film comprising a first surface defined by a first surface structure function modulated by a second surface structure function such that the first surface acts to diffuse light incident on the film, wherein the first surface structure function has a function of a microlens structure, and the second surface structure function (12) has characteristics to provide the diffuse light (figs. 13-17).

Claims 1-6, 10-15, and 21-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Olczak (US Patent No. 6,862,141), or alternatively, by Olczek et al. (US Patent No. 6,952,627).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claims 1, 10, 13, 21, and 24, Olczek discloses an optical structure comprising a light source; a prism film; and an optical film comprising a first surface defined by a first surface structure function modulated by a second surface structure function such that the first surface acts to diffuse light incident on the film, wherein the first surface structure function has a function of a microlens structure, and the second surface structure function has characteristics to provide the diffuse light (abstract and figs. 3-6 and 41).

With respect to claim 2, Olczek discloses the first surface has a correlation function value of less than about 37 percent in a correlation length of about 1 cm or less (abstract).

With respect to claims 3-5, 11, and 25, Olczek discloses a first plurality of elongated elements, each having a cross-section substantially corresponding to a cylindrical lens, the elongated elements being generally parallel in a first direction on at least the first surface of the film (figs. 3-6 and col. 6, lines 13-27).

With respect to claim 6, Olczek discloses the optical film has a second surface opposite to the first surface, the second surface being smooth.

With respect to claims 12 and 15, Olczek the prism film comprises a plurality of raised prismatic features (fig. 4).

With respect to claim 14, Olczek teaches a prism film arranged between the light source and the light diffusing film (fig. 41).

With respect to claim 22, Olczek discloses forming the optical film comprises at least one of the techniques of photolithography, gray-scale lithography, microlithography, electrical discharge machining and micromachining using hard tools (col. 12, lines 12-19).

With respect to claim 23, Olczek discloses the first surface is defined by one of the following equations:  $S_{\text{sub.1}} = A \sin(x + R_1(x, y)) \sin(y)$ ,  $S_{\text{sub.2}} = A \sin(x) \sin(y + R_1(x, y))$ , and  $S_{\text{sub.3}} = A \sin(x + R_1(x, y)) \sin(y + R_2(x, y))$ , wherein  $x$  and  $y$  are coordinates in the  $x$ - $y$  plane of the film,  $R_1(x, y)$  and  $R_2(x, y)$  are random variables, and  $A$  is one of a constant and a random variable (col. 11, lines 60-67).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winston et al. (US Patent No. 5,594,830) in view of Yamashita et al. (US Patent No. 6,130,777).

With respect to claims 1, 10, and 13, Winston discloses an optical structure comprising: a light source (236); a prism film structure; and a light diffusing film (214) arranged over the prism film (210) (fig. 12N). While Winston is silent to further details of the light diffuser, Yamashita teaches a light diffusing film comprising a first surface defined by a first surface structure function (11) modulated by a second surface structure function (12) such that the first surface acts to diffuse light incident on the film, wherein the first surface structure function has a function of a microlens structure, and the second surface structure function has characteristics to provide the diffuse light (e.g. fig. 17). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Winston and Yamashita to provide such a feature to uniformly control the diffusion of light without the need for a diffusing agent.

With respect to claim 11, the combination teaches the first surface structure function is one of a cylindrical lens microlens structure, a spherical lens microlens structure, an aspherical lens microlens structure, an elliptical lens microlens structure, and a parabolic lens microlens structure.



With respect to claims 12 and 15, Winston the prism film comprises a plurality of raised prismatic features.

With respect to claim 14, Winston teaches a prism film (210) arranged between the light source (236) and the light diffusing film (214) (fig. 12N).

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being obvious over Olczak (US Patent No. 6,862,141).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

With respect to claim 7, Olczak teaches all the limitations of claims 1, 3, and 5 as stated *supra*. Though Olczak does not expressly disclose the film has a second surface opposite to the

Art Unit: 2872

first surface, the second surface being defined by the first surface structure function modulated by the second surface structure function, wherein the second surface has a second plurality of elongated elements, each having a cross-section of a cylindrical lens, arranged on the second surface to be generally parallel in a second direction. However, it well known in the art that optical films can be placed on opposing sides of a substrate. Further, with respect to claims 8 and 9, prism films, in particular, can be arranged in display system wherein the first direction is generally parallel to the second direction or wherein the first direction is generally perpendicular to the second direction. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to provide such an element to further control the diffusion capabilities of the system for desired optical effects.

Claim 22 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamashita (US Patent No. 6,130,777)

With respect to claim 22, Yamashita teaches all the limitations of claim 21 as stated *supra*. Though Yamashita does not expressly disclose the forming the optical film comprises at least one of the techniques of photolithography, gray-scale lithography, microlithography, electrical discharge machining and micromachining using hard tools, these techniques are known in the art. Further, the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process. "The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." See In

Art Unit: 2872

re Marosi, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP§2113.

Claim 23 is rejected under 35 U.S.C. 103(a) as being obvious over Gardiner (WIPO Publication No. 02/04858) in view of Te Kolste et al. (US Patent Application Publication No. 2002/0024738).

Gardiner discloses all the limitations of claim 1 as stated supra. Gardiner does not expressly disclose the first surface is defined by one of the following equations:

$$S_1 = A \sin(x + R_1(x, y)) \sin(y),$$

$$S_2 = A \sin(x) \sin(y + R_1(x, y)), \text{ and}$$

$$S_3 = A \sin(x + R_1(x, y)) \sin(y + R_2(x, y)),$$

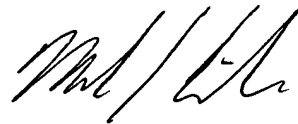
wherein  $x$  and  $y$  are coordinates in the  $x$ - $y$  plane of the film,  $R_1(x, y)$  and  $R_2(x, y)$  are random variables, and  $A$  is one of a constant and a random variable. However, the periodic elements taught by Te Kolste seem to suggest functions that fit at least one of the above equations since variable may be chosen such that they reflect the sinusoidal structure taught by Te Kolste. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Gardiner and Te Kolste and define the first surface according to one of the above equations to provide an even distribution of diffused light.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Consilvio whose telephone number is (571) 272-2453. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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